

**In the Claims:**

Claims 1-13 (canceled)

14. (new) An optical device for an optical pickup apparatus for recording or  
5 reproducing information with respect to an information recording medium, comprising:

a substrate;

a hologram element to diffract incident beams of first and second wavelengths that  
are different from each other;

10 a light receiving element arranged on the substrate and having a first light  
receiving region to receive an incident beam of the first wavelength diffracted by the  
hologram element and a second light receiving region to receive an incident beam of the  
second wavelength diffracted by the hologram element; and

an operation unit to find a difference between a signal from one of the first and  
second light receiving regions that receives an incident beam of one of the first and second  
15 wavelengths made incident to and diffracted by the hologram element and a signal from  
the other of the first and second light receiving regions that does not receive the incident  
beam of the one wavelength made incident to and diffracted by the hologram element and  
receives unnecessary light scattering over the substrate including the first and second light  
receiving regions, and based on the found difference, remove a signal component  
20 representative of the unnecessary light from the signal from the one light receiving region.

15. (new) The optical device as set forth in claim 14, wherein

the first light receiving region and second light receiving region have a nearly  
equal light receiving area.

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16. (new) The optical device as set forth in claim 14, wherein

if the one wavelength is the first wavelength, the operation unit carries out an  
operation of (S1 - S2) to subtract the signal S2 of the second light receiving region from  
the signal S1 of the first light receiving region, and if the one wavelength is the second  
30 wavelength, carries out an operation of (S2 - S1) to subtract the signal S1 of the first light  
receiving region from the signal S2 of the second light receiving region.

17. (new) The optical device as set forth in claim 14, comprising:

determination means for determining whether the wavelength of the incident beam is the first wavelength or the second wavelength; and

polarity switching means for inverting the polarity of an output signal from the operation means between a first polarity and a second polarity according to a result of  
5 determination made by the determination means,

when the determination means determines that the incident beam is of the first wavelength, the polarity switching means switching the polarity of the output signal of the operation unit to the first polarity to provide an operation result of  $(S1 - S2)$  from the signal  
10 S1 of the first light receiving region and the signal S2 of the second light receiving region,

when the determination means determines that the incident beam is of the second wavelength, the polarity switching means switching the polarity of the output signal of the operation unit to the second polarity to provide an operation result of  $(-1) \times (S1 - S2)$  from the signal S1 of the first light receiving region and the signal S2 of the second light  
15 receiving region.

18. (new) The optical device as set forth in claim 14, wherein

the incident beams of the first and second wavelengths that are different from each other are main beams emitted toward the information recording medium to detect  
20 information from the information recording medium and reflected by the information recording medium; and

the operation unit removes the signal component representative of the unnecessary light from the signal of the one light receiving region that receives the reflected main beam diffracted by the hologram element.  
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19. (new) The optical device as set forth in claim 14, wherein

the incident beams of the first and second wavelengths that are different from each other are sub-beams emitted toward the information recording medium to carry out a tracking operation of a track on the information recording medium and reflected by the  
30 information recording medium; and

the operation unit removes the signal component representative of the unnecessary light from the signal of the one light receiving region that receives the reflected sub-beam

diffracted by the hologram element.

20. (new) The optical device as set forth in claim 14, wherein  
the hologram element is divided into first and second regions having different  
5 diffraction axes; and

each of the first and second light receiving regions has a light receiving region to  
receive a diffracted beam from the first region of the hologram element and a light  
receiving region to receive a diffracted beam from the second region of the hologram  
element.

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21. (new) The optical device as set forth in claim 14, wherein  
the first wavelength is in a 650-nm band and the second wavelength is in a  
780-nm band.

15 22. (new) The optical device as set forth in claim 14, wherein  
at least one of a first light source for emitting light of the first wavelength and a  
second light source for emitting light of the second wavelength is arranged on the  
substrate.

20 23. (new) An optical pickup apparatus comprising:  
the optical device as set forth in claim 21;  
a first light source for emitting light of the first wavelength; and  
a second light source for emitting light of the second wavelength.

25 24. (new) The optical pickup apparatus as set forth in claim 23, comprising:  
a first diffraction grating to divide light of the first wavelength from the first light  
source into a main beam and two sub-beams; and  
a second diffraction grating arranged in the optical device, to divide light of the  
second wavelength from the second light source into a main beam and two sub-beams.

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25. (new) The optical pickup apparatus of claim 23, comprising:  
a first diffraction grating arranged in the optical device, to divide light of the first

wavelength from the first light source into a main beam and two sub-beams; and  
a second diffraction grating to divide light of the second wavelength from the second light source into a main beam and two sub-beams.